

REMARKS

Favorable reconsideration of the present application is respectfully solicited.

Claim 16 has been amended for clarity. The scope of the claim has not been substantially altered.

The prior rejection under 35 U.S.C. § 112 and the prior rejection under 35 U.S.C. § 103 based on Balduin et al have been withdrawn. Claims 16-30 have nonetheless been newly rejected under 35 U.S.C. § 103 as being obvious over German patent publication 10105200 which corresponds to Balduin et al. DE '200 will therefore hereinafter be referred to as Balduin et al.

As part of this rejection, the Office Action stated that Balduin et al shows that the glass is moved from a concave frame 5 “to another concave frame (7 in the figures) as the final bending former.” This rejection is respectfully traversed since element 7 of Balduin et al is not a bending former.

The claimed invention is directed to a method and system for bending glass sheets heated to their softening point, in which the glass sheets are subject to both prebending and final bending by gravity while being supported on a frame with a concave forming surface. According to a feature of the invention, and referring for illustration to the non-limiting embodiment of the figures, the glass sheets 2 are transferred between the concave bending frame 3 for prebending by gravity and the concave bending frame 5 for performing the final bending step by way of a transfer former 4 having a concave forming surface and whose outside dimensions are smaller than those of *both* the concave bending frame 3 for performing the prebending step and the concave bending frame 5 for performing the final bending step, wherein the transfer former is moved vertically through the bending formers. As a result, the bending formers have dimensions greater than that of the transfer former and can better shape the edges of the glass sheet.

Balduin et al discloses a method for bending glass panes in pairs. According to this prior art, the glass panes are first deposited on a prebending mold 3, wherein they are prebent under the force of gravity. Paragraph [0039]. A concave suction bending mold 5 having a suction duct 6 is positioned under the prebending mold 3 and has a periphery slightly smaller than that of the prebending mold 3. The concave suction bending mold 5 rises through the prebending mold 3, whereby the prebent glass sheets are transferred to, and subsequently bent by, the concave suction bending mold 5. Paragraphs [0041]-[0044].

The final bending can optionally be performed in conjunction with a convex upper bending mold 4. In either case, the *fully bent* glass sheets can thereafter be transferred to a transport device 7 by lowering the suction bending mold 5 through the transport device 7.

The transfer support 7 of Balduin et al is not a bending mold. Rather, since bending has already been completed at the suction bending mold 5, “further unintended deformation of the edge [of the glass sheets] is prevented” during the transfer step on the transport device 7. Paragraph [0050].

It may therefore be appreciated that Balduin et al is far more different from the claimed invention than has been recognized in the Office Action. Element 5 of Balduin et al is not a transfer former but is instead the final bending mold or former. Therefore, Balduin et al lacks the claimed steps in Claim 16 of “positioning the transfer former to vertically override a final bending former” or “moving the transfer former in a generally vertical relative movement through the final bending former.” It also lacks the features of claim 25 that the perimeter of the transfer former is smaller than a perimeter of the bending frame, or a final bending former whose perimeter is greater than the perimeter of the transfer former.

Instead, the final bending former 5 of Balduin et al passes through the transport device 7 and so the outside dimensions of the transport device 7 are larger -- not smaller --

than those of the area enclosed by the final bending former 5. This difference is important because it prevents Balduin et al from adequately shaping the edges of the glass sheets.

Referring to the annotated Figs. 5 and 6 of Balduin et al shown below, the glass sheets 2 must have dimensions sufficient to be supported by the transport device 7 (Fig. 6). This means that the final bending former 5, which passes through the interior of the transport device 7, cannot shape the edges "D" of the glass sheets. On the other hand, since the outside dimensions of the transfer former according to the invention are smaller than those of the final bending former, and the transfer former is moved vertically through the final bending former, the edges of the glass sheets can be bent by the final bending former. This improved result is unexpected from Balduin et al and so the claims define over this prior art.

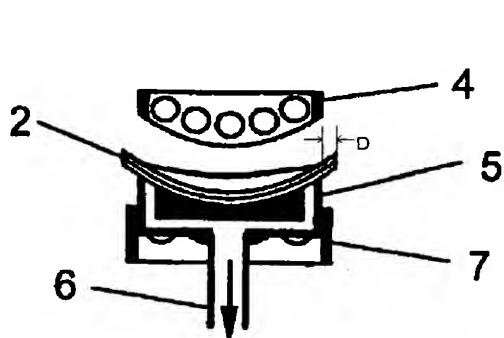


Fig. 5

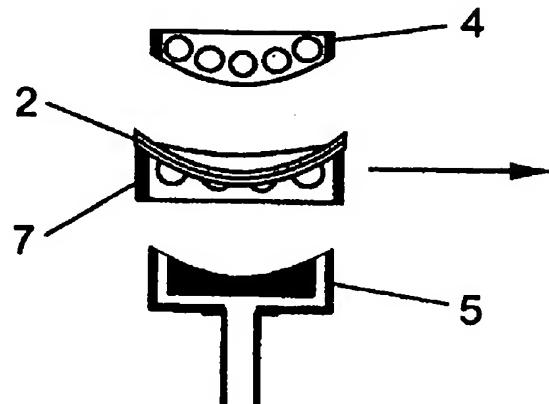


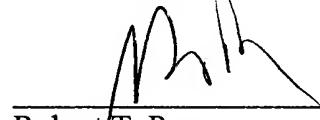
Fig. 6

Claims 21 and 22 further recite that individual glass sheets are bent, and so further defines over Balduin et al on this basis, since Balduin et al is directed to a process for bending glass panes *in pairs*.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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